

Intermediate Programming

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Description

The goal of this course is to deepen students understanding of computing. Students will learn key concepts of software engineering, graphical user interface, and user interface design. Students will gain a deeper understanding of basic data structures and use them to solve more complex problems in a collaborative manner.

Software Used

Dr. Java, Greenfoot, Visual Basic 8 Express Edition

Class work

All assignments are posted on <http://www2.catoosa.k12.ga.us/fingertips/rhs/kjohnson.rhs/index.htm>.

Each student is required to complete daily assignments. If the student is absent, the work must be made up in the computer lab before or after school. The student should make arrangements on the day of return to make up class work. *All assignments will be weighted equally.* Students will read a variety of current events, magazine articles, internet research and technical textbooks to fulfill Ringgold High School's literacy goals.

Books and Sources

Pelland, P. Microsoft Visual Basic 2008 Express Edition: Build a Program Now!, Second Edition. Microsoft Press, 2008.

Regnicoli, L. Pialorsi, P. and Brunetti, R. Build Windows 8 Apps with Microsoft Visual C# and Visual Basic Step by Step. Microsoft Press, 2013.

FBLA

FBLA is a co-curricular student organization that plays an integral part in the components of the Business & Technology course standards. FBLA activities are incorporated throughout this course and the rest of the Business and Computer Science courses. Students are strongly urged to join FBLA (\$15.00) to benefit from the wealth of opportunities the organization has to offer.

Topics Covered

Unit 1: HARDWARE AND SOFTWARE COMPONENTS

Students will apply knowledge of hardware and software components. Students will apply knowledge of high-level program execution.

Unit 2: PROBLEM SOLVING

Students will practice the application of problem-solving strategies to develop and increase logical thinking skills.

Unit 3: SOFTWARE ENGINEERING

Students will demonstrate knowledge of key concepts in software engineering.

Unit 4: USER INTERFACE DESIGN

Students will demonstrate knowledge of the important principles in user interface design.

Unit 5: DATA STRUCTURES

Students will apply their knowledge of arrays and lists. Students will demonstrate an understanding of stacks and queues.

Unit 6: LIMITS OF COMPUTING

Students will investigate the various limits to computing, identify key limiting factors and how they affect computing, and discuss possible technological advances to overcome some of these limits in the future.

Career Opportunities

- Computer Engineer
- Game Developer
- Programmer
- Software Engineer

Other Information

Expectations for Academic Success

- 1) Complete daily classwork assignments
- 2) Participate in discussions and ask questions
- 3) Participate constructively as a team member
- 4) Problem solve and accept challenges
- 5) Challenge yourself to continuously improve

Business Department Cheating Policy: No credit will be given for any assignment where cheating has occurred.

The syllabus may be updated as needed throughout the semester.